

[Please add new claim 7 as follows:]

-- 7. A multi-band radio terminal apparatus comprising:

a transmitter/receiver for processing radio communication signals of a plurality of communication frequency bands, said radio communication signals being used to communicate with a base station;

a first frequency converter for frequency-converting the frequency bands of said radio communication signals between the communication frequency bands and an intermediate frequency band; and

a second frequency converter for converting said radio communication signals between base-band signals and an intermediate frequency signal,

wherein said first frequency converter includes:

one reception-sided mixer for converting a reception signal within the communication frequency band into another reception signal within the intermediate frequency band,

one transmission-sided mixer for converting a transmission signal within the intermediate frequency band into another transmission signal within the communication frequency band,

a first local oscillator for commonly supplying a local oscillator signal to both said reception-sided mixer and said transmission-sided mixer,